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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

THOMPSON, JR, OTIS L

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2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,588	Applicant(s) WRAY ET AL.	
	Examiner OTIS L. THOMPSON, JR	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-10,17,22 and 24-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9,17,22,24-31,34 and 35 is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,10,32 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed March 30, 2009 have been fully considered but they are not persuasive. Applicant argues, with respect to claim 1, that the combination of Odom and Elek does not teach or suggest *a burst of trial data being transmitted at a higher rate than the packets to be transmitted*. Applicant further states that the Elek reference does not deal with setting up a new call, but with an existing transmission, while the present application behaves differently when setting up a new call and continuing an existing call.

Examiner disagrees with Applicant's assertions. In fact, Odom in view of Elek teaches and suggests these features in an obvious manner. The following description is derived from Elek (Admission Control Based on End-to-End Measurements), Section II C. Elek discloses an admission control procedure in which a sender issues a probe (a stream of packets, all of the same length, sent at constant arrival times). Elek states that the probe rate should be equal to the maximal bit rate that the sender wishes to use for a session. The probe rate is used for a session that is to be set up (See Page 624, Section C, "...probe rate from a source has to be below a given bound that is settled in a service contract with the operator to limit the sizes of the session that can be set up). **This obviously means that Elek does deal with setting up a new call.**

After the probe rate is set, the sender probes for a period of time, and the destination counts the received packets until the probe time period expires. The destination issues a measurement report to the sender, and the sender then decides about admission. Elek later discloses on page 625 (Section C continued), that the sender may at any time reduce the value of the established bit rate or close the connection. If the sender decides to reduce the bit rate any time after the probe (*burst of trial data*) has been transmitted at a probe rate that is equal to the

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maximal bit rate, then it is obvious that *the burst of trial data has been transmitted at a higher bit rate than the packets to be transmitted.*

The Detailed Action below is updated to reflect claim amendments.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. 1-3, 6-8, 10, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odom et al. (Cisco VoIP Call Admission Control) in view of Elek et al. (Admission Control Based on End-to-End Measurements).

3. **Regarding claim 1**, Odom et al. discloses *a method of call admission control for a continuous stream of data in packet switched networks including at least two local area networks communication to one another across a connecting network, the method comprising the steps of:*

a. *Transmitting a burst of trial data from a first node in the first local area network through the connecting network to a second node in the second local area network*

(Odom, Page 19, SAA Protocol; The SAA protocol sends a probe [i.e. burst of trial data; Page 23, SAA Probe Format, see "...each probe consists of multiple packets..."] from the SAA client on the gateway device in the first LAN [Odom, Figure 4] to the server gateway in the other network [Odom, Page 19, SAA Protocol].);

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- b. *Reflecting the burst of trial data received at the second node back to the first node* (Odom, Page 19, SAA Protocol, see "...returns probe to the sender...");
- c. *Receiving the reflected burst of trial data at the first node through the connecting network* (Odom, Page 19, SAA Protocol, see "...returns the probe to the sender...", i.e. receiving the reflected burst is inherent);
- d. *Comparing the reflected burst of trial data to the transmitted burst of trial data to determine whether transmission of a continuous stream of data can be initiated from the first node in the first local area network to the second node in the second local area network* (Odom, Page 19, SAA Protocol, Calculating Planned Impairment Value; It is noted that in order to determine packet loss in a ping style test [Odom, Page 18, SAA Probes Versus Pings], the reflected burst of trial data must be analyzed and compared to the data sent to determine if a portion of the burst was lost [i.e. if packet loss occurred]).

Odom et al. discloses the claimed invention above but fails to specifically disclose that *the burst of trial data is transmitted at a higher data rate than the packets to be transmitted*. However, Elek et al. discloses an admission control method which uses probes to measure end-to-end delay and packet loss (Pages 624-625, The Admission Control Procedure). In this method, the probe rate is disclosed as being equal to the maximal bit rate that the sender wishes to use for the session (Page 624, Right Column, 1st paragraph under section C). Elek et al. discloses further control of the bit rate by the sender, while also disclosing that in order to raise a peak bit rate for a connection, a new probe must be sent from the sender to the same receiver (Page 625, Left Column, 2nd paragraph, see "...peak bit rate may only be raised by a new probe..."). These teachings suggest that in order to admit a connection between a sender and a

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receiver at higher bit rate than the current bit rate, a probe must be sent out at that higher bit rate in order to provide accurate measurements of end-to-end delay and packet loss at the higher bit. Those measurements are obviously used in determining whether the actual connection should be established at that higher bit rate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Elek et al. into Odom et al. in order to establish a call at a higher bit rate than the current bit rate.

4. **Regarding claim 2**, Odom et al. in view of Elek et al. inherently discloses *selecting a path through the connecting network, the path being determined by the connecting network* because in Odom et al., according to the SAA Protocol on page 19, SAA probes used for CAC go out randomly on ports in the top end of the audio UDP-defined port range. The path is thus inherently determined by the connecting network and not predefined.

5. **Regarding claim 3**, Odom et al. in view of Elek et al. discloses that *the burst of trial data is the same size as the packets to be transmitted in the continuous stream of data* (Odom et al., Page 18, SAA Probes Versus Pings, see "...SAA packets can be built and customized to mimic the type of traffic for which they are measuring the network-in this case a voice packet..."; Page 19, SAA Protocol, see "...SAA probes...go out randomly...; they use a packet size based on the codec the call will use...").

6. **Regarding claim 6**, Odom et al. in view of Elek et al. discloses *comparing the number of packets in the transmitted burst of trial data and the reflected burst of trial data, and calculating an estimate of packet loss rate* (Odom et al., Page 18, The Cisco Service Assurance Agent, see "...capabilities to measure network delay and packet loss are useful...reasonable to assume that

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the packet delay and loss values that the probe returns...”; Page 19, Calculated Planning Impairment Factor, see “...calculation based on network delay and packet loss figures...”).

7. **Regarding claim 7**, Odom et al. in view of Elek et al. discloses *transmitting multiple bursts of trial data to improve the estimate* (Odom et al., Page 23 under Figure 10, see “...periodic probe...will be sent to that destination to refresh the information...dynamically adjusts the probe traffic...”).

8. **Regarding claim 8**, Odom et al. in view of Elek et al. discloses *deciding to transmit packet data based on an acceptable packet loss rate for the transmission of the continuous stream of data* (Odom et al., Page 18, Measurement Based CAC Mechanisms, see “...SAA probes...measure the loss and delay...These values...to use in making a decision on the condition...ability to carry a voice call...”; Page 19, Calculated Planning Impairment Factor, see “...probe delay and loss information is used in calculating an ICPIF value that is then used as a threshold for CAC decisions...”).

9. **Regarding claim 10**, Odom et al. in view of Elek et al. discloses that *if the packet loss rate is not acceptable, the transmission of the continuous stream of data is not initiated* (Odom et al., Page 18, Measurement Based CAC Mechanisms, see “...SAA probes...measure the loss and delay...These values...to use in making a decision on the condition...ability to carry a voice call...”; Page 19, Calculated Planning Impairment Factor, see “...probe delay and loss information is used in calculating an ICPIF value that is then used as a threshold for CAC decisions...”).

10. **Regarding claims 32 and 33**, Odom et al. in view of Elek et al. discloses *wherein said first node comprises a telephone and wherein said second node comprises a telephone* (Odom et

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al., Page 1 1st paragraph, see “...(CAC) is a concept that applies to voice traffic only...”, i.e. This implies that the first and second nodes are telephones; Also see figure 8).

Allowable Subject Matter

11. Claims 9, 17, 22, 24-31, 34, and 35 are allowed.
12. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or adequately suggest *wherein the packet loss rate is not acceptable, the method further comprising the step of changing the priority of the transmission of continuous stream of data and repeating steps a) to d) above at the changed priority.*

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to OTIS L. THOMPSON, JR whose telephone number is (571)270-1953. The examiner can normally be reached on Monday to Thursday 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571)272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Otis L Thompson, Jr./
Examiner, Art Unit 2419

April 21, 2009

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2419